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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,136	04/25/2006	Hiroyuki Naitou	289740US0PCT	3274
22850	7590	06/13/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER PUTTLITZ, KARL J				
ART UNIT		PAPER NUMBER		
1621				
NOTIFICATION DATE		DELIVERY MODE		
06/13/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
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### Office Action Summary

**Application No.**

10/577,136

**Applicant(s)**

NAITOU ET AL.

**Examiner**

KARL J. PUTTLITZ

**Art Unit**

1621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 4-9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date various
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election without traverse of Group I, claims 1-3 in the reply filed on 3/12/2008 is acknowledged. Claims 4-9 are withdrawn from consideration.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The contents of liquid PR is unclear - is it a portion of liquid I.

The contents of liquid PR are also unclear.

The term "the surface of liquid PR" lacks antecedent basis. The term "in the surface" is also unclear. Does any liquid penetrate the surface. as in a mixture?

### ***Prior Art Rejections***

The elected claims are drawn to, inter alia, a method for producing a catalyst having a composition represented by the following formula (1) [see formula and definitions in claim 1] for use in producing methacrylic acid through gas-phase catalytic oxidation of methacrolein with molecular oxygen, comprising the steps of: (i) preparing a solution or slurry containing at least molybdenum, phosphorus, and vanadium (liquid I);

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(ii) preparing a solution or slurry containing ammonium radical (liquid II); (iii) preparing a mixture of the liquid I and the liquid II by introducing one liquid (liquid PR) of the liquid I and the liquid II into a tank (tank A) and pouring the other liquid (liquid LA) on a continuous region in the surface of the liquid PR, the continuous region occupying 0.01 to 10% of the whole area of the surface of the liquid PR; and (iv) drying and calcining the resultant solution or slurry containing a catalyst precursor comprising all the catalyst constituents.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

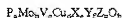
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S.

Publication No. 20060041168, based on an application by Naitou et al. (Naitou)

With regard to the above embodiments, Naitou teaches a method of producing a catalyst for the production of methacrylic acid, which has a composition of the following formula (1),



(1).

comprising mixing 100 parts by mass of a solution or a slurry (liquid A) containing molybdenum atoms, phosphorous atoms and vanadium atoms in which the content of ammonium species is 0 to 1.5 mol relative to 12 mol of the molybdenum atoms, 5 to 300 parts by mass of a solution or a slurry (liquid B) containing 6 to 17 mol of ammonium species relative to 12 mol of the molybdenum atoms contained in the liquid A and a solution or a slurry (liquid C) containing an element Z such as cesium, the liquid B is mixed with the liquid A, the liquid C or a mixture of the liquid A and the liquid C over 0.1 to 15 minutes, see paragraphs 0011+.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by JP2000296336 (JP 336).

JP 336 teaches The catalyst used in the production of methacrylic acid by the vapor phase catalytic oxidation of methacrolein with molecular oxygen has a composition of the formula  $\text{PaMo}_b\text{V}_c\text{Cu}_d\text{XeYfZgOh}$  and is produced by mixing a solution (A) containing at least molybdenum, phosphorus and vanadium with a solution (B) containing an ammonia compound and further mixing the resulting mixed solution (AB) with a solution (C) containing the element Z. The amount of ammonium radicals in the solution A is  $\leq 1.5$  mol based 12 mol molybdenum atoms in the solution A and the amount of ammonium radicals in the solution AB is 6-17 mols based 12 mol molybdenum atoms in the solution AB.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, can be reached at telephone number (571) 272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karl J. Puttlitz/

Primary Examiner, Art Unit 1621